UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,279	10/22/2003	Michael J. Wookey	30014200-1119	4924

58328 7590 10/30/2007	**EXAMINER**
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/691,279	WOOKEY ET AL.
	Examiner	Art Unit	
	Michael J. Hicks	2165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>07 August 2007</u>.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1,2,4-7 and 9-12</u> is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1,2,4-7 and 9-12</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>22 October 2003</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a) ☐ All b) ☐ Some * c) ☐ None of:

       1. ☐ Certified copies of the priority documents have been received.

       2. ☐ Certified copies of the priority documents have been received in Application No. _____.

       3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-2, 4-7, and 9-12 Pending.

        Claims 3 and 8 Canceled.

Response to Arguments

2.   Applicant's arguments filed 8/7/2007 have been fully considered but they are not

persuasive.

As per Applicants arguments that O'Shea fails to teach the limitation of the

datatype having a reference to a data instance that is maintained separately from the

datatype, Examiner respectfully disagrees. The abstract of O'Shea teaches that the

conversion may take place at a remote conversion engine. Firstly, this indicates that

the data instance and the datatype may be stored in separate locations. Secondly, the

fact that the datatype may be remote from the data instance further indicates that for a

conversion to take place, the datatype must be sent a reference to the remote data

instance that it is to convert. At the time the datatype receives the reference to the data

instance the reference will be included in datatype.

In light of the above arguments the rejection will be updated to reflect the

amendments made to the claims and maintained.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1-2, 4-7, and 9-12 rejected under 35 U.S.C. 103(a) as being unpatentable

over Lehner et al ("Building an Information Marketplace Using a Content and Memory Based

Publish/Subscribe System", Advanced Techniques in Personalized Information Delivery; Fredrick-

Alexander Universitat Erlangen-Nurnberg, Pgs 27-46; 2001 and referred to hereinafter as Lehner) in

view of O'Shea.

        As per Claims 1, 6, 11, and 12, Lehner teaches a computer-implemented method

in a data processing system having a program in a memory, computer readable

medium, and system comprising: asynchronously receiving a first data at a subscriber

(i.e. *"...the proposed PubScribe service relies on the asynchronous communication model of publish and*

subscribe, a very well known concept to implement asynchronous communication in distributed

systems...Thus, traditional publish/subscribe systems implement a document based asynchronous and

anonymous dispatching of messages." The preceding text excerpt clearly indicates that data is

asynchronously received at a subscriber through the publish/subscribe system.) (Figure 1.1; Page 28,

Paragraphs 2-3); determining whether the subscriber subscribes to at least one additional

data after receiving the first data (i.e. *"From a structural point of view, the PubScribe system*

provides customized storage of former messages to be able to provide subscription services not only to

the current state of an entity (current weather condition) but also to access previously published

messages to computer the accurate result of a subscription..." The preceding text excerpt clearly

indicates that after a data is received, it is recorded so that after the reception of the data, it may be

referred back to in order to determine subscription to, and initiate delivery of, additional data.) (Page 29,

Paragraph 3); querying for at least one additional data responsive to a determination that

the subscriber subscribes to the at least one additional data (i.e. *"Ex-nunc subscriptions are*

based on a set of messages. This set of messages is constructed starting from an empty set at the time

of registering a subscription...Evaluations in those applications areas are not only based on snapshot

data (current message), but on historical data either stored locally within the subscription management

system or within an underlying database (usually a data warehouse)." The preceding text excerpt clearly

indicates that if is determined that the subscriber subscribed to additional data after receiving the first

data, the additional data is found via query in the database and returned to the subscriber as part of the

set of messages.) (Page 28, Paragraph 4; Page 29, Paragraph 1; Page 32, Paragraph 3), and wherein

the first datatype includes a reference to a data instance, the data instance being

maintained separately from the first datatype (i.e. *"A conversion manager can receive producer*

data, such as topic threads, from a data provider and convert, either internally or through remote

conversion engines, to a preferably preselected format for republication over the network to subscribing

data consumers." The preceding text excerpt clearly indicates that the data instance and the datatype

may be stored in separate locations and that for a conversion to take place, the datatype must be sent a

reference to the remote data instance that it is to convert. At the time the datatype receives the reference

to the data instance the reference will be included in datatype.) (Abstract). Also note that performing

the aforementioned operations requires a memory and a processor.

Lehner fails to teach that the data received is a datatype, the first datatype has a

metadata that describes a data and a reference to the data, the data being maintained

separately from the first datatype, the metadata including a key that enables the first

datatype to be joined with other datatypes having the key in their respective metadata,

and wherein determining whether the subscriber subscribes to additional datatypes

comprises identifying the key in the first datatype.

O'Shea teaches that the data received is a datatype (i.e. *"While the consumer data

type can be the same as the producer data type, as in traditional systems, the inventive system also

provides for a consumer data type different than the producer data type. "* The preceding text excerpt

clearly indicates that the data received includes a datatype.) (Column 3, Lines 63-66), the first

datatype has a metadata that describes a data and a reference to the data (i.e. *"The forum

data is sent in a producer language and format, such as English text. The producer forum data is received

by a conversion manager 18 equipped to convert the English language data to one or more different

languages or data types, preferably in accordance with previously identified preferences of the data

consumer 12 stored in a consumer profile 20. The converted information can then be sent over the

network to the data consumer 12 in her desired language or data type...Alternatively and preferably, the

forum data from the data producer 14 is converted and integrated into one or more converted databases

22, 24, 26. Each converted database 22, 24, 26 can be a replication using replication technology referred

to here as a replicator 28, in a converted data type, of a corresponding database 32 in the producer data

type. The network communication system 10 can manage a large number of converted databases, the

three illustrated only being an example...The conversion step of the invention can be utilized to perform

any of a number of conversions to bring data in a language and format that is desired by the data

consumer 12. Other data format conversions besides language text translation could include conversions

of text and document formats (txt, doc, html, sgml, TeX, LaTeX, TROFF or pdf), graphic formats (GIF,

JPG, DIB, GIF89 , PNG, TIFF, BMP, or VRML), compression formats (gzip, zip, tar, arc, zoo), sound

formats (wav, au or midi) and video formats (mov, avi, mpeg, or dvd). These formats are only examples,

and other format changes could also be made within the scope of the invention. Conversions may occur

between homogeneous file types in each category. Conversions may also include heterogeneous types,

for example, text to speech, speech to text, video to audio, and audio to text. File formats that contain

both audio and video could be converted to audio or text. Video could be converted to stills, and a still*

graphic could be converted to an audio or text description of a scene. These formats are merely examples, and any data type conversions could be offered as conversion technology develops and permits." The preceding text excerpt clearly indicates that in order to perform the indicated conversions, metadata must exist to describe the data instance which is converted to that datatype. Note that the datatype specific databases include references to the data instances.) (Column 4, Lines 46-63; Column 5, Lines 16-36), the data being maintained separately from the first datatype (i.e. *"The converted information can then be sent over the network to the data consumer 12 in her desired language or data type... Alternatively and preferably, the forum data from the data producer 14 is converted and integrated into one or more converted databases 22, 24, 26."* The preceding text excerpt clearly indicates that the data instances are stored at the producers and consumers, or in a database, while the data types are stored at the server/conversion manager.) (Column 4, Line 52-57), the metadata including a key that enables the first datatype to be joined with other datatypes having the key in their respective metadata (i.e. *"A data consumer can choose to participate in multilingual forums preferably through a subscription-based process. Each data consumer preferably identifies over the network to the network communication system the forum she wishes to participate in, the preferred data types, such as languages, and optionally billing information if the network communication system bills for its services...The conversion manager receives the further forum data from the consumer which can also be referred to as value added data, and converts the further forum data back to the data type or language of the original data producer or of the replicated database with which the conversion manager is associated. The conversion manager may also convert the incoming value added data to other languages or data types according to the preference profiles of other data consumers subscribing to the network communication system."* The preceding text excerpt clearly indicates that a key exists in the metadata that enables datatypes to be joined (e.g. converted from a single document at the same time to be relayed to a single user).) (Column 5, Lines 63-67; Column 6, Lines 1-2), and wherein determining whether the subscriber subscribes to additional datatypes comprises identifying the key

in the first datatype. (i.e. *"A data consumer can choose to participate in multilingual forums preferably through a subscription-based process. Each data consumer preferably identifies over the network to the network communication system the forum she wishes to participate in, the preferred data types, such as languages, and optionally billing information if the network communication system bills for its services...The conversion manager receives the further forum data from the consumer which can also be referred to as value added data, and converts the further forum data back to the data type or language of the original data producer or of the replicated database with which the conversion manager is associated. The conversion manager may also convert the incoming value added data to other languages or data types according to the preference profiles of other data consumers subscribing to the network communication system."* The preceding text excerpt clearly indicates that the it is determined that the subscriber subscribes to additional datatypes by examining the key in the metadata of the user profile.) (Column 5, Lines 63-67; Column 6, Lines 1-2).

It would have been obvious to one skilled in the art at the time of Applicants invention to modify the teachings of Lehner with the teachings of O'Shea to include that the data received is a datatype, the first datatype has a metadata that describes a data and a reference to the data, the data being maintained separately from the first datatype, the metadata including a key that enables the first datatype to be joined with other datatypes having the key in their respective metadata, and wherein determining whether the subscriber subscribes to additional datatypes comprises identifying the key in the first datatype. with the motivation of receiving producer data, such as topic threads, from a data provider and converting, either internally or through remote conversion engines, to a preferably preselected format for republication over the network to subscribing data consumers (O'Shea, Abstract).

As per Claims 2 and 7, Lehner teaches asynchronously receiving at least one of the additional data (i.e. *"Thus, traditional publish/subscribe systems implement a document based asynchronous and anonymous dispatching of messages... Ex-nunc subscriptions are based on a set of messages. This set of messages is constructed starting from an empty set at the time of registering a subscription..."* The preceding text excerpt clearly indicates that the additional data is received a the subscriber as part of a set of messages, wherein messages are received asynchronously.) (Page 28, Paragraphs 2-3; Page 32, Paragraph 3).

Lehner fails to teach that the data received is a datatype.

O'Shea teaches that the data received is a datatype (i.e. *"While the consumer data type can be the same as the producer data type, as in traditional systems, the inventive system also provides for a consumer data type different than the producer data type. "* The preceding text excerpt clearly indicates that the data received includes a datatype.) (Column 3, Lines 63-66).

It would have been obvious to one skilled in the art at the time of Applicants invention to modify the teachings of Lehner with the teachings of O'Shea to include that the data received is a datatype with the motivation of receiving producer data, such as topic threads, from a data provider and converting, either internally or through remote conversion engines, to a preferably preselected format for republication over the network to subscribing data consumers (O'Shea, Abstract).

As per Claims 4 and 9, Lehner teaches that a storage controller is queried for the additional data (i.e. *"Ex-nunc subscriptions are based on a set of messages. This set of messages is constructed starting from an empty set at the time of registering a subscription...Evaluations in those applications areas are not only based on snapshot data (current message), but on historical data either stored locally within the subscription management system or within an underlying database (usually a*

data warehouse)." The preceding text excerpt clearly indicates that a database/storage controller is queried for the additional data.) (Page 28, Paragraph 4; Page 29, Paragraph 1; Page 32, Paragraph 3).

Lehner fails to teach that the data is a datatype.

O'Shea teaches that the data is a datatype (i.e. *"While the consumer data type can be the same as the producer data type, as in traditional systems, the inventive system also provides for a consumer data type different than the producer data type. "* The preceding text excerpt clearly indicates that the data received includes a datatype.) (Column 3, Lines 63-66).

It would have been obvious to one skilled in the art at the time of Applicants invention to modify the teachings of Lehner with the teachings of O'Shea to include that the data is a datatype with the motivation of receiving producer data, such as topic threads, from a data provider and converting, either internally or through remote conversion engines, to a preferably preselected format for republication over the network to subscribing data consumers (O'Shea, Abstract).

As per Claims 5 and 10, Lehner teaches subscribing to the first data and at least one of the additional data (i.e. *"This paper proposes the PubScribe framework using a content and memory based publish/subscribe system... Ex-nunc subscriptions are based on a set of messages. This set of messages is constructed starting from an empty set at the time of registering a subscription..."* The preceding text excerpt clearly indicates that subscriptions are possible, and more specifically Ex-nunc type subscriptions are available which would include a subscription to the first and additional data.) (Abstract; Page 32, Paragraph 3).

Lehner fails to teach that the data is a datatype.

O'Shea teaches that the data is a datatype (i.e. *"While the consumer data type can be the same as the producer data type, as in traditional systems, the inventive system also provides for a*

consumer data type different than the producer data type. "The preceding text excerpt clearly indicates that the data received includes a datatype.) (Column 3, Lines 63-66).

It would have been obvious to one skilled in the art at the time of Applicants invention to modify the teachings of Lehner with the teachings of O'Shea to include that the data is a datatype with the motivation of receiving producer data, such as topic threads, from a data provider and converting, either internally or through remote conversion engines, to a preferably preselected format for republication over the network to subscribing data consumers (O'Shea, Abstract).

Points of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Hicks whose telephone number is (571) 272-2670. The examiner can normally be reached on Monday - Friday 8:30a - 5:00p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on (571) 272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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